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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,096	08/20/2003	Sung-hi Lee	1293.1819	4963
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STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER KASSA, HILINA S	
			ART UNIT 2625	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/644,096

Applicant(s)

LEE, SUNG-HI

Examiner

Hilina S. Kassa

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :08/20/03, 11/22/04, 04/25/05, 10/21/05.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikenoue et al. (US Patent Number 5,268,993).

#### **(1) regarding claim 1:**

In figures 4-12b, Ikenoue et al. disclose a method of utilizing a memory of a printer printing using emulation information stored in a first or a second memory (32, 33, figure 4; column 4, lines 10-14), the method comprising:

storing emulation information selected from among a plurality of emulation information stored into the first memory into a predetermined storage area of the second memory when the printer is initialized (column 4, lines 58-68; note that a specification emulation is selected then it gets registered in the memory in the processing device and general initial values are stored);

analyzing a type of emulation information of printing data transmitted to the printer (column 5, lines 59-61; lines 65-68; column 6, lines 1-2; note that the selected emulation type is analyzed then printing modes get registered in the printer);

determining whether a type of the emulation information stored into the predetermined storage area of the second memory matches the type of the emulation information analyzed (column 6, lines 64-68; note that emulation information gets analyzed); and

if the type of the emulation information stored into the predetermined storage area does not match the type of the emulation information analyzed (column 6, line 64-column 7, line 9), retrieving an emulation information type from the first memory matching the type of the emulation information analyzed and storing the retrieved emulation information into the predetermined storage area of the second memory (column 7, lines 30-40; if the emulation information is different, the same emulation gets initialized and the analytical conditions get set in the style).

**(2) regarding claims 2 and 4:**

Ikenoue et al. further disclose, wherein the predetermined storage area of the second memory has a storage capacity to store a biggest size emulation information from among the plurality of emulation information stored in the first memory (column 2, lines 19-45; column 4, lines 60-68; column 5, lines 17-44; note that the first memory stores the initial emulation values in various setting items; however, the second memory

Art Unit: 2625

stores user's own font i.e. a user can change the values of the setting items after setting the initial values with in the range setting. Then the values that are changed by the user get entered. So, it is clear that the second memory could store more than the first storage).

**(3) regarding claim 3:**

Ikenoue et al. further disclose, a printer memory utilization apparatus printing using emulation information stored in a first or a second memory (32, 33, figure 4; column 4, lines 10-14), the apparatus comprising:

an emulation information retrieving unit that retrieves emulation information from among a plurality of emulation information stored into the first memory and stores the retrieved emulation information into a predetermined storage area of the second memory (column 5, lines 39-44; lines 59-62);

a printing data analyzing unit that analyzes a type of emulation information of received printing data to support printing the received printing data and outputs the type of the emulation information analyzed (column 6, line 64-column 7, line 9); and

an emulation information comparing unit that compares a type of the emulation information stored into the predetermined storage area of the second memory with the type of the emulation information analyzed and outputs a comparison result (column 7, lines 29-40),

wherein the emulation information retrieving unit retrieves an emulation information type from the first memory matching the type of the emulation information analyzed (column 7, lines 30-40), in response to the comparison result (column 7, lines 41-45), and stores the retrieved emulation information into the predetermined storage area of the second memory (column 8, lines 13-17; note that the style of the emulation gets stored in the nonvolatile memory).

**(4) regarding claim 5:**

Ikenoue et al. further disclose, the apparatus of claim 3, wherein the first memory is a read only memory (ROM) and the second memory is a random access memory (RAM) (32, 33, figure 4; column 4, lines 10-14; note that ROM is used to store information about the font patterns and sizes which the emulation function is set also in column 4, lines 48-49. In addition to that, RAM is used as the area in which user's own fonts are registered, which is considered as the secondary storage as user sets the emulation styles in column 5, lines 17-21).

**(5) regarding claim 6:**

Ikenoue et al. further disclose, the apparatus of claim 3, wherein the emulation information retrieving unit retrieves the matching emulation information type from the first memory (column 6, lines 64-66), if according to the comparison result the emulation

Art Unit: 2625

information type of the received printing data does not match the emulation information type stored in the predetermined storage area of the second memory (column 6, line 64-column 7, line 9).

**(6) regarding claim 7:**

In figures 1 and 4, Ikenoue et al. further disclose a printer (10, figure 1; column 3, lines 26-28), comprising:

a first memory storing a plurality of deactivated printer emulation information (32, figure 4; column 4, lines 10-12);

a second memory storing active emulation information (33, figure 4; column 4, lines 12-14); and

a programmed computer processor performing a process (31, figure 4; column 4, lines 7-8), comprising:

analyzing a type of emulation information of received print data (column 5, lines 59-62),

determining whether a type of the active emulation information matches the analyzed emulation information type of the received print data (column 6, lines 64-68), and



storing in the second memory, from the deactivated emulation information stored in the first memory (column 7, lines 10-16), an emulation information type matching the analyzed emulation information type of the received print data according to the determining, as a new activated emulation information (column 7, lines 16-20, lines 31-40; note that when the same emulation is present, user's setting or convenience can be increased by switching the style in order to print in the desired conditions).

**(7) regarding claim 8:**

Ikenoue et al. further disclose, the printer of claim 7, wherein the first memory is a non-volatile memory and the second memory is a volatile memory (column 8, lines 13-17; note that the original style of emulation is stored in the non-volatile memory. It is described in claim 5 that the RAM is used as the second memory. It is however inherent that a RAM is a volatile memory).

**(8) regarding claim 10:**

Ikenoue et al. further disclose, a printer, comprising: a programmed computer processor activating and deactivating printer emulation modes in a predetermined random access memory area in response to emulation information type of received print data (column 2, lines 19-45; note that the printing processing sets a setting values

Art Unit: 2625

which correspond to the analytical conditions wherein selects a predetermined store means. As it is described above, the store means for the second memory is considered to be the RAM).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikenoue et al. (US Patent Number 5,268,993) as applied to claims 1, 3 and 7 above, and further in view of Smith (US Patent Number 6,128,094, see IDS).

**(1) regarding claim 9 and 11:**

Ikenoue et al. disclose all of the subject matter as described as above except for teaching wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form, and the programmed computer processor retrieves compressed deactivated emulation information from the first memory, decompresses the retrieved deactivated emulation information, and stores the

Art Unit: 2625

retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information.

However, Smith discloses a printer wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form (column 7, lines 21-26), and the programmed computer processor retrieves compressed deactivated emulation information from the first memory (column 3, lines 56-59; column 4, lines 11-16), decompresses the retrieved deactivated emulation information (column 4, lines 13-14), and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information (column 4, lines 14-16, note that the RAM is the secondary storage).

Ikenoue et al. and Smith are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a printer wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form, and the programmed computer processor retrieves compressed deactivated emulation information from the first memory, decompresses the retrieved deactivated emulation information, and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information. This is because it helps to save memory size and it is faster to be processed.

The suggestion/motivation for doing so would have been that it is efficient for higher print processing speed and it saves memory space (column 3, lines 62-67).

Therefore, it would have been obvious to combine Ikenoue et al. with Smith to obtain the invention as specified in claims 9 and 11.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koike (US Patent Number 5,751,430) discloses an output apparatus and method of a printer or display which receives commands from a host computer and executes subsequent data received from the outside and for selecting one of a plurality of emulation modes.

Nakazato (US Patent Number 7,212,299 B2) discloses a printing system includes a computer and a printer. The computer includes a plurality of printer drivers provided for different kinds of emulations, respectively.

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb could be reached at (571) 272- 7406.

Art Unit: 2625

**Any response to this action should be mailed to:**

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Washington, D.C. 20231

**Or faxed to:**


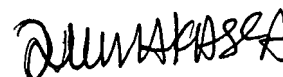
**(703) 273-8300 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Hilina Kassa

June 20, 2007



TWYLER LAMB  
SUPERVISORY PATENT EXAMINER